

**REMARKS**

Claims 1 – 48 are currently pending in the application. By the present amendment, claims 1, 7, 8, 30, 34, 46 and 47 have been amended. More specifically, claims 1, 7, 8, 30 and 34 have been amended to tie the recited method to another statutory class, and claims 46 and 47 have been amended to clarify the recited “characteristic data” as “image configuration characteristic data.” Applicant submits that no new matter has been entered. Support for the amendment can be found, for example, at least in original claims 1, 30 and 42 and page 38, line 15 – page 39, line 3 (paragraph [0106] as numbered in the Published Patent Application US 2006/0066841). Reconsideration of the rejected claims in view of the above amendment and following remarks is respectfully requested.

***Interview Summary***

Applicant gratefully acknowledges the courtesy extended to their representative in telephone interviews dated February 10, 2009 and February 20, 2009. In the interview of February 10, 2009, the § 101 rejections were discussed and possible amendments were discussed to address these rejections. Additionally, Applicant’s representative explained that the present application claims priority to a provisional application which precedes the publication date of the primary reference.

In the interview of February 20, 2009, Applicant’s representative and the Examiner discussed the support for the amendments to claims 1, 7, 8, 30 and 34 at page 38, line 15 – page 39, line 3. Applicant’s representative noted that the above-noted pages disclosed a “workstation or personal computer that typically runs the software” including “a plurality of input/output devices and a system unit that includes both hardware and software necessary to provide the

tools to execute the method of the invention.” The Examiner stated that this above-noted passage provides support for the “processor” recited in amended claims 1, 7, 8, 30 and 34.

### ***35 U.S.C. §101 Rejections***

Claims 1 – 20<sup>1</sup> were rejected under 35 U.S.C. § 101 as purportedly being directed to non-statutory subject matter. Applicant respectfully traverses these rejections.

With regard to claims 1, 30, 42, 46 and 47, the Examiner states that these claims:

... recite “characteristic data,” but the data is not specific data. The claim did not specify any particular type or nature of the data; nor did it specify how or from where the data was obtained or what the data represented. Therefore, [the] claims as a whole represent mere abstraction; i.e., a disembodied mathematical concept representing nothing more than an “abstract idea” which as a whole do not provide for a practical application.

Applicant respectfully disagrees.

Initially, Applicant notes that claims 1, 30 and 42 recite “image configuration characteristic data.” Additionally, by the present amendment, claims 46 and 47 have been amended to recite “image configuration” characteristic data. As such, Applicant submits that the data is specific data and that the claims do specify the particular type and the nature of the data.

Furthermore, Applicant submits that the image configuration characteristic data is explained in the specification at least at paragraphs [0030], [0041] and [0083] – [0088] as numbered in the Published Patent Application US 2006/0066841. For example, paragraph [0041] states:

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<sup>1</sup> While the Examiner has indicated that claims 1 – 20 were rejected under 35 U.S.C. § 101, Applicant notes that the Examiner refers to claims 30, 42, 46 and 47. Thus, Applicant assumes the Examiner intended to reject claims 1 – 48 under 35 U.S.C. § 101.  
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... (i) performing simulation calculations for various levels of aberration components using image configuration characteristic data (e.g., lens Numerical Aperture setting, the Illumination Distribution utilized, physical pattern information such as line shape, size, and pitch, whether the pattern includes 'phase shifting' features or not, etc);

Thus, Applicant respectfully submits that the specification does specify how or from where the image configuration characteristic data is obtained and what the image configuration characteristic data represents. Therefore, Applicant respectfully submits that the claims as a whole do not represent mere abstraction; i.e., a disembodied mathematical concept.

With regard to claims 1 and 30, the Examiner notes that a valid process under 35 U.S.C. § 101 must either 1) transform underlying subject matter, or 2) be tied to another statutory class, such as a particular apparatus. By the present amendment, Applicant has amended claims 1, 7, 8, 30 and 34 to tie the recited method to another statutory class.

Thus, for at least the reasons set forth above, Applicant respectfully requests the rejections under 35 U.S.C. § 101 be withdrawn.

### ***35 U.S.C. §102 Rejections***

Claims 1 – 41 and 46 – 48 were rejected under 35 U.S.C. §102(a) for being anticipated by “Evaluation of Zernike sensitivity method for CD distribution,” published June 26, 2003 (hereinafter “Evaluation”). This rejection is respectfully traversed.

To anticipate a claim, each and every element as set forth in the claim must be found, either expressly or inherently described, in a single prior art reference. MPEP § 2131. Applicant respectfully submits that Evaluation does not constitute prior art against the instant invention.

The present application has a filing date of June 10, 2005 and is a U.S. National Stage application of PCT/US04/004854, which claims priority to U.S. Provisional Application Serial No. 60/449,514 filed February 21, 2003. Applicants submit that the cross reference to related applications is noted in the preliminary amendment filed October 24, 2005.

In view of the above, Applicant submits that Evaluation, which has a publication date of June 26, 2003, does not constitute prior art against the instant invention. Moreover, Applicant notes that Evaluation is the basis for the present application. Accordingly, Applicant requests the rejection of claims 1 – 41 and 46 – 48 be withdrawn.

### **35 U.S.C. § 103 Rejection**

Claims 42 – 45 were rejected under 35 U.S.C. §103(a) as being unpatentable over Evaluation in view of US Patent No. 5,623,853 issued to Novak et al. (“Novak”). This rejection is respectfully traversed.

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. See MPEP §2142. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.<sup>2</sup> Second, there must be a reasonable expectation of

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<sup>2</sup> While the *KSR* court rejected a rigid application of the teaching, suggestion, or motivation (“TSM”) test in an obviousness inquiry, the [Supreme] Court acknowledged the importance of identifying “a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does” in an obviousness determination. *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1356-1357 (Fed. Cir. 2007) (quoting *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1731 (2007)).  
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success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicant submits that Evaluation does not constitute prior art against the instant invention.

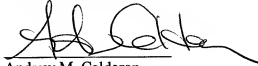
As discussed above, the present application has a filing date of June 10, 2005 and is a U.S. National Stage application of PCT/US04/004854, which claims priority to U.S. Provisional Application Serial No. 60/449,514 filed February 21, 2003. Applicants submit that the cross reference to related applications is noted in the preliminary amendment filed October 24, 2005.

In view of the above, Applicant submits that Evaluation, which has a publication date of June 26, 2003, does not constitute prior art against the instant invention. Accordingly, Applicant requests the rejection of claims 42 – 45 be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant submits that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicant hereby makes a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 19-0089.

Respectfully submitted,  
Steven D. SLONAKER

A handwritten signature in black ink, appearing to read 'Andrew M. Calderon', written over a horizontal line.

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